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EXAMINER
BASOM, BLAINE T

ART UNIT	PAPER NUMBER
2173	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/607,592	Applicant(s) PANG, DAYMAN	
	Examiner Blaine Basom	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☒ Claim(s) *6 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/30/2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign not mentioned in the description: reference number 100, in figure 1; reference number 200, in figure 2; reference numbers 325, 335, and 350, in figure 3; and reference number 400, in figure 4. Appropriate correction is required.

Specification

The disclosure is objected to because of the following informalities:

On lines 18, 22, and 23 of page 12, reference number 502 is designated as a processor, whereas in figure 5, reference number 502 designates "main memory." Additionally, reference number 500 is referenced in the specification on page 12, line 22, but is not in any of the drawings.

Claim Objections

In claim 6, the phrase "a communications mechanism for communicating the received update from the GUI to the CUI, for communicating the updated configuration from the CUI to the CK, and for communicating the device configuration from the CK to the CUI and from the CUI to the GUI" occurs. The use of "the device configuration" in this phrase is particularly objected to because the prior use of "the configuration" in the claim is not explicitly associated *solely* with a device.

In claim 18, the phrase "the graphical component associated with the configuration command" is objected to. It should be more explicitly stated as to which recited configuration command the graphical component is associated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-5 and 13-19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,046,742, which is attributed to Chari. In general, Chari presents a method for the organized display of information for remote devices in a computer network. This display of device information allows a user to easily view and alter the configuration information of a particular device. More particularly, this display of device information allows a user to view and alter the Management Information Base (MIB) of a remote device, wherein the MIB of a device comprises configuration information, which is used by the device to configure itself.

To begin, it is noted that the method disclosed by Chari is implemented on a computer (see column 6, lines 35-40). Therefore, regarding claim 13, it is inherent that the method is implemented on a computer-readable medium comprising computer-executable instructions. As

for both claims 1 and 13, the method of Chari involves presenting a graphical user interface to the user, where this graphical user interface includes forms which display the MIB values of a specific remote device. Moreover, these MIB values are displayed in dialog boxes (see column 13, lines 16-20). It is therefore understood that these dialog boxes are a graphical component of the forms of Chari, and that further, some form of graphical programming language is necessary to create such a dialog box. Additionally, Chari discloses that the MIB values that are modifiable by the user are displayed in white dialog boxes (see column 14, lines 42-45). Therefore, such white dialog boxes, i.e. graphical components, are associated with device configuration commands. For example, Chari discloses an MIB variable, "coolingFanMinSpeed," which is modifiable through a white dialog box (see column 14, lines 45-48). Altering this variable value affects, i.e. configures, the system fans of the remote device (see column 14, line 57). The dialog box associated with "coolingFanMinSpeed" is therefore associated with a device configuration command for configuring the system fans of the remote device. Upon entering a new value for an MIB variable in a white dialog box, specific software components are then responsible for implementing the configuration change on the remote device. Particularly, an "MIB Manager Module" and an "SNMP Module" are implemented to adjust the MIB of the remote device, which in turn configures the remote device according to the device configuration command (see column 14, line 64 – column 15, line 2). Because the "MIB Manager Module" is also used to retrieve and display to the user data from the remote device, i.e. console (see column 8, lines 16-19), and because retrieving this data necessitates interfacing with the remote console, the "MIB Manager Module" is considered a "console user interface." Similarly, because the "SNMP Module" contains the basic functions used to retrieve and set

MIB data (see column 9, lines 13-32), which configures the remote device, it is considered a "configuration kernel." And finally, since the "MIB Manager Module" and "SNMP Module" are implemented in response to the adjustment of a value in a white dialog box, these modules are considered to be linked to that dialog box. Moreover the "MIB Manager Module" and the "SNMP Module" are generally used to display MIB values in dialog boxes in the graphical user interface disclosed by Chari (see column 13, lines 29-34). Therefore, the graphical user interface disclosed by Chari is created using dialog boxes, and the "MIB Manager Module" and "SNMP Module" to which the dialog boxes are linked.

As per claims 2 and 14, Chari teaches that associating a graphical component with a device configuration command can be performed using a macro. For example, as described above, the dialog box associated with "coolingFanMinSpeed" is associated with a device configuration command for configuring the system fans of the remote device. As additionally described by Chari, an "SNMP Window Module" is used to associate the dialog box with the "coolingFanMinSpeed" MIB variable (see column 13, lines 24-34). Such a module may include functions, which are considered equivalent to macros (see column 7, lines 50-60). Because of this, the "SNMP Window Module" is considered to incorporate a macro. Therefore, it is interpreted that a macro of the "SNMP Window Module" is used to associate the "coolingFanMinSpeed" dialog box with a device configuration command.

Regarding claim 3, the dialog box associated with "coolingFanMinSpeed" is associated with a device configuration command, wherein the value entered into the dialog box is used to control the minimum speed below which a fan on the remote device is considered

malfunctioning (see column 13, lines 24-27). This is considered equivalent to "adding a control to a dialog" as recited in claim 3.

In reference to claims 4, 5, 15, and 16, the graphical user interface disclosed by Chari is created using dialog boxes, and the "MIB Manager Module" and "SNMP Module" to which the dialog boxes are linked, as explained above. Furthermore, these dialog boxes are created using a "SNMP Window Module," as similarly described above. According to Chari, these modules may be implemented as object-oriented software components (see column7, lines 50-60). Therefore, it is interpreted that building the graphical user interface disclosed by Chari requires compiling or interpreting the "SNMP Window Module," the "SNMP Module," and the "MIB Manager Module" on a general purpose computer system.

Referring to claim 17, the method disclosed by Chari teaches the idea of initializing a graphical component associated with a configuration command to a corresponding state of a remote device's configuration kernel. For example, Chari explicitly shows that a dialog box, which is associated with a device configuration command for configuring the system fans of the remote device, is initialized with the "coolingFanMinSpeed" value. This "coolingFanMinSpeed" value is obtained from the management information base (MIB) of the remote device and represents the minimum speed below which a fan on the remote device is considered malfunctioning (see column 13, lines 24-27). The "coolingFanMinSpeed" value therefore represents a state of the MIB for a remote device (see column 13, lines 24-34). Because the MIB defines the aspects and components of the remote device, i.e. the configuration of the device (see column 2, lines 41-50), the MIB of the remote device is considered a "configuration kernel," like

that expressed in claim 17. As shown by reference number 1718 in figure 17, the initialized graphical component, or more specifically, the dialog box, is displayed on a window of a remote workstation. Moreover, Chari presents the idea of receiving an update to the configuration command from a user action on the associated graphical component. Continuing with the "coolingFanMinSpeed" example, this is done by typing in a new value into the "coolingFanMinSpeed" dialog box associated with the command (see column 14, lines 49-55). In response to receiving a new value for the dialog box, an "MIB Manager Module" disclosed by Chari is used to check the value to determine if it is within a pre-defined range (see column 14, lines 56-63). Therefore, it is inherent that the updated "coolingFanMinSpeed" value, which represents a configuration command, is sent to the "MIB Manager Module." And because the "MIB Manager Module" is also used to retrieve and display to the user data from the remote device, i.e. console (see column 8, lines 16-19), the "MIB Manager Module" is considered a "virtual console," as recited in claim 17. Lastly, Chari notes that the "MIB Manager Module" updates the state of the MIB, i.e. configuration kernel, with the passed updated value, which represents a configuration command (see column 14, lines 64-66).

As per claim 18, the idea of determining whether an updated configuration command is interdependent with a second configuration command, and refreshing the graphical component associated with the configuration command to reflect the updated state of the configuration kernel, i.e. MIB, is encompassed by the teachings of Chari. According to Chari, all displayed MIB variables that are dynamic are updated every five seconds (see column 13, line 65- column 14, line 1). Consequently, within 5 seconds of a user updating a dialog box value representing a configuration command, all other displayed MIB values, including those that are interdependent

with the updated value, are also updated. Therefore, because both ideas result in the adjustment of graphical components associated with interdependent configuration commands, the idea of updating dynamic MIB values every 5 seconds, as disclosed by Chari, is considered to encompass the idea of determining whether an updated configuration command is interdependent with a second configuration command, and refreshing the graphical component associated with the configuration command to reflect the updated state of the MIB.

As per claim 19, Chari notes that the "MIB Manager Module" updates the state of the MIB, i.e. configuration kernel, which is interpreted to be in the remote device (see column 14, lines 64-66). In other words, the "MIB Manager Module" uploads an updated state of the MIB to the MIB of the remote device.

Claims 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,041,350, which is attributed to Takimoto. In general, Takimoto discloses a network management system that controls one or more network element management systems. A network element management system is a device which is used to control a network element. More specifically, a network element management system includes a management information database (MIB) and a behavior execution controller (BEC) (see column 7, line 66 – column 8, line 2). The MIB stores managed objects, which represent network element resources. It is interpreted that altering managed objects manages, i.e. configures, the resource (see column 1, lines 39-53). The BEC of the network element management system is used to manipulate the managed objects (see column 8, lines 5-16). Regarding the claimed invention, the network

management system of Takimoto is an apparatus used to configure a network element management system.

As per claim 6, the network management system disclosed by Takimoto includes an MIB and a simulated behavior execution controller (SBEC). The MIB of the network management system stores duplicates of the managed objects stored in the MIB of the network element management system (see column 5, lines 15-20). Modifying one of these managed objects in the network management system correspondingly modifies, or re-configures, the MIB of the network element management system (see column 5, lines 25-36). And because a managed object is created via object-oriented programming (see column 1, lines 33-34), it is interpreted that it is implemented through computer program code. Therefore, because it is has code used for configuring the network element management system, the MIB of the network management system disclosed by Takimoto is considered a "configuration kernel" as recited in claim 6. The SBEC, which is understood to be implemented with computer code, is used to simulate the manipulation of the managed objects in the MIB of the network element management system (see column 8, lines 32-39). Because the result of this simulation is used for updating the configuration of the MIB of the network element management system (see column 5, lines 25-36), and because it models the network element management system, i.e. console, the SBEC of the network management system is considered a "console user interface" as recited in claim 6. In addition, the network management system disclosed by Takimoto is interpreted to include a graphical user interface having code for receiving an update to the configuration of the network element management system in response to a user action (see column 5, line 66 - column 6, line 11). Lastly, it is interpreted that the network element management system disclosed by

Takimoto includes a communications mechanism for communicating the received update from the graphical user interface to the SBEC, for communicating the updated configuration from the SBEC to the MIB, and for communicating the device configuration from the MIB to SBEC, and from the SBEC to the graphical user interface. Specifically, a "user interface controller," "scenario controller," and "transaction controller," communicate the received update from the graphical user interface to the SBEC (see column 6, lines 3-11). The SBEC directly interacts with the MIB of the network management system (see column 6, lines 11-17), so it is interpreted that there must be some communication mechanism for communicating the updated configuration from the SBEC to the MIB, and for communicating the device configuration from the MIB to the SBEC. The device configuration is communicated from the SBEC to the graphical user interface using the "user interface controller" and "transaction controller" (see column 6, lines 11-22).

In reference to claim 7, the MIB of the network management system disclosed by Takimoto includes code for configuring a device. As described above, this code is used to implement managed objects, which are stored in the MIB. Since these managed objects are realized as objects via object-oriented programming (see column 1, lines 33-34), and by the well-known definition of an "object," it is interpreted that the managed objects comprise variables and functions (as an additional motivation for this interpretation, column 1, lines 35 – 39 shows that managed objects include variables, and column 3, lines 63-65 shows that managed objects comprise functions). Moreover, as shown in figure 1, the MIB of the network management system includes managed objects, referred to in the drawing as "DMO_{xx}", which are linked

together in a tree or graph. Therefore, it is interpreted that the MIB also includes a data structure.

In regard to claim 9, the SBEC of the network management system disclosed by Takimoto includes code for updating the configuration of a network element management system. As described above, the code of the SBEC is used to configure the network element management system by simulating the manipulation of the managed objects in the MIB of the network element management system. Such manipulations involve commands to create, delete, read, set, and execute managed objects or their attributes (see column 1, lines 39-53). Therefore it is interpreted that the code of the SBEC includes commands from this command set (as an additional motivation for this interpretation, column 10, lines 18-28 shows that the SBEC uses the command to read attributes of a managed object).

Regarding claims 8 and 10 Takimoto et al. discloses that the code of the SBEC is used to configure the network element management system by simulating the manipulation of the managed objects in the MIB of the network element management system. This simulation involves manipulating the duplicate managed objects stored in the MIB of the network management system (see column 8, lines 32-39). Such manipulations involve a library of commands to create, delete, read, set, and execute managed objects or their attributes (see column 1, lines 39-53). Takimoto further shows that a "scenario controller" and a "transaction controller" interpret requests from the graphical user interface and deliver commands from this library of commands to the SBEC to manipulate the managed objects in the MIB (see column 10, lines 7-29). Therefore, these commands are also indirectly linked to the graphical user interface. Consequently, since the MIB, SBEC, and graphical user interface all linked to these commands,

the code for configuring the network element management system, i.e. the MIB of the network management system, is considered to reside in a library linked to the SBEC and graphical user interface. The code for updating the configuration of the network element management system, i.e. the SBEC of the network management system, is similarly considered to reside in a library linked to the SBEC and the graphical user interface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Takimoto, as described above, and also admitted prior art. As shown above, the network management system disclosed by Takimoto encompasses the apparatus of claim 6. More specifically, the network management system includes a management information database (MIB) and a simulated behavior execution controller (SBEC). The MIB includes code, i.e. managed objects, for configuring a network element management system, as is described above. Moreover, these managed objects of the MIB of the network management system are duplicates of the managed objects that are stored in the MIB of the network element management system (see column 8, lines 29-32). Therefore, it is interpreted that the managed objects in the MIB of the network management system have been originally coded for operation in the MIB of a

network element management system. Like the MIB, the SBEC of the network management system includes code for updating the configuration of a network element management system, as is described above. More specifically, the SBEC is used to simulate the manipulation of the managed objects in the MIB of the network element management system. This simulation involves manipulating the duplicate managed objects stored in the MIB of the network management system in the same way that the network element management system manipulates the managed objects in its MIB (see column 8, lines 32-39). The network element management system includes a behavior execution controller (BEC) which is used to manipulate the managed objects (see column 8, lines 5-16). Therefore it is interpreted that the SBEC of the network management system directly corresponds, i.e. has the same functionality, of the BEC of the network element management system. Since the SBEC has the same functionality of the BEC, it is determined that the SBEC is equivalent to the BEC, which has been originally coded for operation on the network element management system. Thus the code for updating the network element management system, and the code for updating the configuration of a network element management system are reusable. However, Takimoto does not disclose that the code for configuring a network element management system, i.e. the MIB of the network management system, and the code for updating the configuration of a network element management system, i.e. the SBEC of the network management system, are firmware, as is expressed in claims 11 and 12. The Applicant, on the other hand, discloses admitted prior art, which conveys that configuration functionality can be implemented in firmware. Specifically, the Applicant states that "...the GUI developer ends up having to maintain command set aware source code that duplicates the functions of the CUI firmware implemented in the remote device's serial console."

(see page 2, lines 9-12) The benefits of firmware are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Takimoto and the admitted prior art, to modify the network management system of Takimoto, such that the MIB and the SBEC of the network management system are implemented in firmware. It would have been advantageous to one of ordinary skill to utilize such a combination because a firmware implementation is generally faster than a software implementation and requires less circuitry than a hardware implementation, as is well known in the art.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The applicant is required under 37 C.F.R. §1.111(C) to consider these references fully when responding to this action. Like the Patents of Chari and Takimoto explained above, the U.S. Patent of Kekic et al. cited therein teaches a method for configuring a remote network device using the management information database of the remote device. The U.S. Patent of Barker et al. cited therein similarly presents a method for managing a remote network element. Lastly, the U.S. Patent of Muta cited discloses a method for remotely controlling a server's graphical user interface via html files.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (703) 305-7694. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 746-7238 for regular communications and (703) 746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

btb
December 13, 2002

JOHN W. CABECA
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